

**California High-Speed Rail Authority**



**RFP No.: HSR13-57**

**Request for Proposals for Design-Build  
Services for Construction Packages 2 - 3**

**Reference Material, Part E.3 –  
Merced – Fresno Section 404 Permit**



**DEPARTMENT OF THE ARMY**  
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO  
CORPS OF ENGINEERS  
1325 J STREET  
SACRAMENTO CA 95814-2922

REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY PERMIT**

Permittee: California High-Speed Rail Authority  
Attn: Mark McLoughlin  
770 L Street, Suite 800  
Sacramento, California 95814-3359

Permit Number: SPK-2009-01483

Issuing Office: U.S. Army Engineer District, Sacramento  
Corps of Engineers  
1325 "J" Street  
Sacramento, California 95814-2922

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below. A notice of appeal options is enclosed.

**Project Description:**

Construct approximately 22.3 miles of Permit Phase 1 (PP1) of the Merced to Fresno Section of the California High-Speed Train (HST) system (Figures 1 and 2). The project consists of constructing two fully grade-separated tracks within a 60 to 120-foot right-of-way, associated facilities, and portions of existing surface streets that would be realigned or modified to cross the alignment. The alignment would be largely at-grade (18.2 miles), with sections above grade on retained-fill embankment (0.6 mile) and elevated structures (1.9 miles), as well as a section below grade (1.6 miles) (Figures 4-a to 4-f). Associated facilities consist of two 9,600-sf switching stations (0.44 acre), and five 8,000-sf paralleling stations (1.10 acres). The project would result in permanent impacts to approximately 1.63 acres of wetlands, 5.33 acres of other waters of the U.S. and temporary impacts to approximately 3.86 acres of other waters of the U.S. (Maps 02 to 24).

This section starts at-grade for approximately 10 miles before rising to an elevated structure over the San Joaquin River. The alignment returns to grade south of West Herndon Avenue and continues at-grade for approximately 6.9 miles. The alignment enters a 1.6-mile retained cut trench under State Route (SR) 180 before returning to grade at San Joaquin Street and continuing through the proposed Fresno Station.

The proposed Fresno Station building would be approximately 75,000 square feet, with a maximum height of approximately 64 feet (Figure 3). The two-level station would be at-grade, with passenger access provided both east and west of the HST guideway and the Union Pacific Railroad (UPRR) tracks, which would run parallel with one another adjacent to the station. Entrances would be located at both G and H Streets. The station plans include three parking structures and one surface parking lot. No waters of the U.S. would be impacted by construction of the Fresno Station.

The permit area does not include the northern 1.8 miles of PP1 crossing the Fresno River and Madera Irrigation District Main Canal.

Final design plans are being prepared by the design-build contractor and will be submitted to the Corps for approval prior to initiation of construction activities within waters of the U. S.

#### **Project Location:**

The approximately 22.3-mile project is located at the southern end of the approximately 65-mile Merced to Fresno Section of the California HST (Figure 2). The alignment begins on the west side of the Burlington Northern Santa Fe (BNSF) tracks immediately south of Avenue 15 ¾, (36.977265°, Longitude -120.022124°) in Madera, Madera County, and travels southeast along the west side of the BNSF tracks until Cottonwood Creek. South of Cottonwood Creek the alignment turns south towards the UPRR tracks and joins the UPRR corridor north of the San Joaquin Corridor. The alignment crosses over the San Joaquin River and UPRR tracks and continues on the west side of the UPRR tracks through Fresno, ending on the west side of the UPRR tracks south of SR 41 at Los Angeles Street, (Latitude 36.723642°, Longitude -119.784803°) in Fresno, Fresno County, California. The project is within Madera and Fresno counties. Associated rail facilities are located at various locations within the project footprint. The project footprint and associated facilities are shown in Figures 4-a to 4-f.

The proposed Fresno High-Speed Train Station is located in Downtown Fresno, less than one half mile east of SR 99. The station would be centered on Mariposa Street and bordered by Fresno Street on the north, Tulare Street on the south, H Street on the east, and G Street on the west (Figure 3).

#### **Permit Conditions:**

##### ***General Conditions:***

1. The time limit for completing the work authorized ends on **April 1, 2019**. If you find that you need more time to complete the authorized activity, submit your request for a

time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 3 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

4. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

***Special Conditions:***

1. No less than 15 days prior to the initiation of construction, you shall submit to the Corps, for review and approval, a plan-view drawing of the work proposed to be conducted within waters of the U.S., and cross-section view drawings of all crossings of waters. In addition, you shall include a description of any deviations from the authorized work, including the amount and type of waters that would be impacted, and the amount and type of compensatory mitigation.

2. Within 60 days following completion of the authorized work or at the expiration of this permit, whichever occurs first, you shall submit as-built drawings and a description of the work conducted on the project site and within the on-site and off-site compensatory mitigation areas to the Corps for review. The drawings shall be signed and sealed by a registered professional engineer and include the following:

- a. The Department of the Army Permit number.
- b. Plan view drawings of the locations of the authorized work footprint (as shown on the permit drawings) with an overlay of the work as constructed. The drawings should show all "earth disturbance," wetland impacts, structures, and the boundaries of any on-site and off-site mitigation areas. The drawings shall contain appropriate topographic contours of the entire site.
- c. Ground and aerial photographs of the completed work. The camera positions and view-angles of the ground photographs shall be identified on a map, aerial photograph, or project drawing
- d. A description and list of all deviations between the work as authorized by this permit and the work as constructed. Clearly indicate on the as-built drawings the location of any deviations.



3. To compensate for unavoidable impacts to 6.96 acres of waters of the United States, you shall construct 8.48 acres of vernal pools within the 60.92-acre wetland restoration area at the Lazy K Ranch mitigation site and fully implement the approved *Permittee-Responsible Mitigation Plan for Onsite and Offsite Mitigation for Permitting Phase 1 of the Fresno to Merced Section of the California High-Speed Train Project*, dated March 2014, prepared by AECOM, CH2M Hill, and ECORP Consulting, Inc. You shall submit monitoring reports for the created wetlands by December 31<sup>st</sup> of each year following the construction of mitigation. You shall monitor the mitigation area for at least five (5) consecutive growing seasons after construction, and/or until the Corps determines the success criteria are met for three years without human intervention.

4. Within one year of the initiation of impacts to waters of the U.S. in Permit Phase 1, as identified on the enclosed maps 2 to 24, of the *Section 404 Permit Application, October 2013 Modification Package, Permitting Phase 1 Segment, Merced to Fresno Section, California High Speed Train Project*, dated October 8, 2013, you shall:

a. Establish a fully-funded endowment to provide for maintenance and monitoring of off-site mitigation. Information on the proposed endowment holder and the proposed endowment agreement shall be provided to the Corps for approval prior to establishment.

b. Designate an appropriate conservation-oriented third-party entity to function as preserve manager and to hold the required conservation easements. Information on the proposed conservation easement holder shall be provided to the Corps for approval prior to designation.

c. Record permanent conservation easements maintaining all mitigation areas as wetland preserve and wildlife habitat in perpetuity. Copies of the proposed conservation easement language shall be provided to the Corps of Engineers for approval prior to recordation.

d. Provide copies of the recorded documents to the Corps of Engineers no later than 30 days prior to the start of construction of any of the activities authorized by this permit.

5. Within 60 days following completion of construction activities, you shall restore all temporary impacts to waters of the U.S. and adjacent upland areas to their original contour and condition and submit as-built plans, as identified in Section 5.1 of the approved plan.

6. You shall develop a final long-term management plan for the Lazy K Ranch mitigation site, which must be approved, in writing, by the Corps prior to initiation of construction activities within waters of the U.S. You shall ensure the required long-term management plan shall include all of the mitigation components summarized in the mitigation plan.

7. You shall notify the Corps in writing of any intention to assign rights or obligations of the conservation easements to a new grantee and no such assignment shall be made without the Corps' written approval of the Grantee. Any assignment of the rights and

obligations under the conservation easement(s) shall only be made to an organization/individual qualified to hold such interests under the applicable laws and who is committed to holding these easements exclusively for conservation purposes. Any assignment of the conservation easement shall be in writing and a copy of the assignment shall be provided to the Corps. The conservation easements shall then be re-recorded and indexed in the same manner as any other instrument affecting title to real property. A copy of the newly recorded conservation easements shall be furnished to the Corps within 90 days of recordation.

8. You shall comply with all terms and condition of the attached March 12, 2014 (No. SB13001IN, RM# 391375) Section 401 Water Quality Certification.

9. You shall implement the attached August 31, 2012 Memorandum of Agreement (MOA), entitled *Memorandum of Agreement Among the Federal Railroad Administration, the California High-Speed Rail Authority, and the California State Historic Preservation Officer Regarding the Merced-Fresno Section of the California High-Speed Train System in Merced, Madera, and Fresno Counties*, and signed by these entities, in its entirety. The FRA is the lead federal agency responsible for implementing and enforcing the Memorandum of Agreement, as signed. If you fail to comply with the implementation and associated enforcement of the MOA, the Corps may determine that you are out of compliance with the conditions of your Department of the Army permit and suspend the permit.

a. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. You must comply with Stipulation IV of the MOA, Unanticipated Discoveries During Construction, and notify this office of compliance with this stipulation prior to continuing work.

10. This Corps permit does not authorize you to take an endangered species, in particular the San Joaquin kit fox (*Vulpes macrotis mutica*), California tiger salamander (*Ambystoma californiense*), conservancy fairy shrimp (*Branchinecta conservatio*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), Colusa grass (*Neostapfia colusana*), San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*), hairy Orcutt grass (*Orcuttia pilosa*), Greene's tuctoria (*Tuctoria greenei*), succulent owl's-clover (*Castilleja campestris ssp. succulenta*), Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*), and California Central Valley steelhead (*O. mykiss*), or designated critical habitat. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (e.g., an Endangered Species Act Section 10 permit, or a Biological Opinion under Endangered Species Act Section 7, with "incidental take" provisions with which you must comply). The enclosed Fish and Wildlife Service Biological Opinion (Number 08ESMF00-2012-F-0248-2, dated March 13, 2014) and National Marine Fisheries Service Biological Opinion (Number 2011/05794, dated April 17, 2012), contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also

specified in the Biological Opinions. Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with "incidental take" of the attached Biological Opinions, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the Biological Opinions, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The U. S. Fish and Wildlife Service and the National Marine Fisheries Service are the appropriate authority to determine compliance with the terms and conditions of their Biological Opinions, and with the Endangered Species Act. You must comply with all conditions of these Biological Opinions, including those ascribed to the FRA.

**11.** You shall notify the Corps of the start and completion dates within 10 calendar days prior to initiation of construction activities within waters of the U.S. and 10 calendar days following completion of construction activities.

**12.** You are responsible for all work authorized herein and ensuring that all contractors and workers are made aware and adhere to the terms and conditions of this permit authorization. You shall ensure that a copy of the permit authorization and associated drawings are available for quick reference at the project site until all construction activities are completed.

**13.** You shall clearly identify the limits of disturbance in the field with highly visible markers (e.g. construction fencing, flagging, silt barriers, etc.) prior to commencement of construction activities in waters of the U.S. You shall maintain such identification properly until construction is completed and the soils have been stabilized. You are prohibited from any activity (e.g. equipment usage or materials storage) that impacts waters of the U.S. outside of the permit limits.

**14.** You shall use only clean and nontoxic fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.

**15.** You shall conduct all work within natural watercourses and temporary impacted waters when the project area is naturally dewatered, or is dewatered in accordance with a Corps approved dewatering plan. No work shall be conducted in flowing water.

**16.** Prior to initiation of construction activities within waters of the U.S., you shall employ construction best management practices (BMPs) onsite to prevent degradation to avoided on-site and off-site waters of the U.S. Methods shall include the use of appropriate measures to intercept and capture sediment prior to entering waters of the U.S., as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs shall be in place prior to the initiation of construction and shall remain until construction activities are completed. You shall

maintain erosion control methods until all on-site soils are stabilized. You shall submit a description of and photo-documentation of your BMPs to our office within 10 days of commencement of construction. Photos may be submitted electronically to *regulatory-info@usace.army.mil*. The project file number (SPK-2009-01483) shall be included with each submittal.

**Further Information:**

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

- ☐ Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
- ☒ Section 404 of the Clean Water Act (33 U.S.C. 1344).
- ☐ Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant.

Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

  
Name Mark A. McLoughlin  
Title Director of Environmental Services  
Permittee

March 13, 2014  
Date

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below

  
Michael J. Farrell  
Colonel, U.S. Army  
District Commander

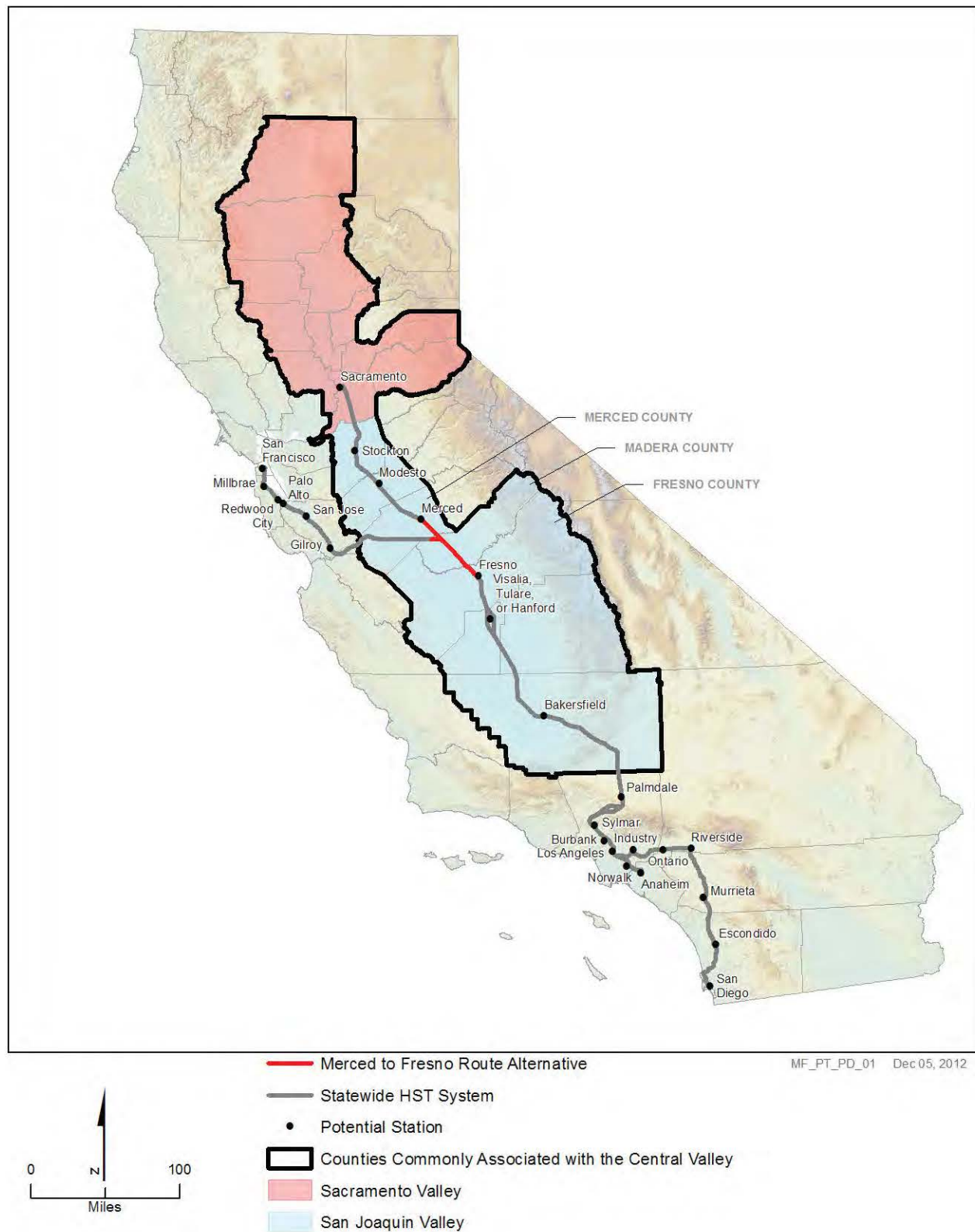
13 MAR. 2014  
Date

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
Name \_\_\_\_\_  
Title \_\_\_\_\_  
Transferee

\_\_\_\_\_  
Date

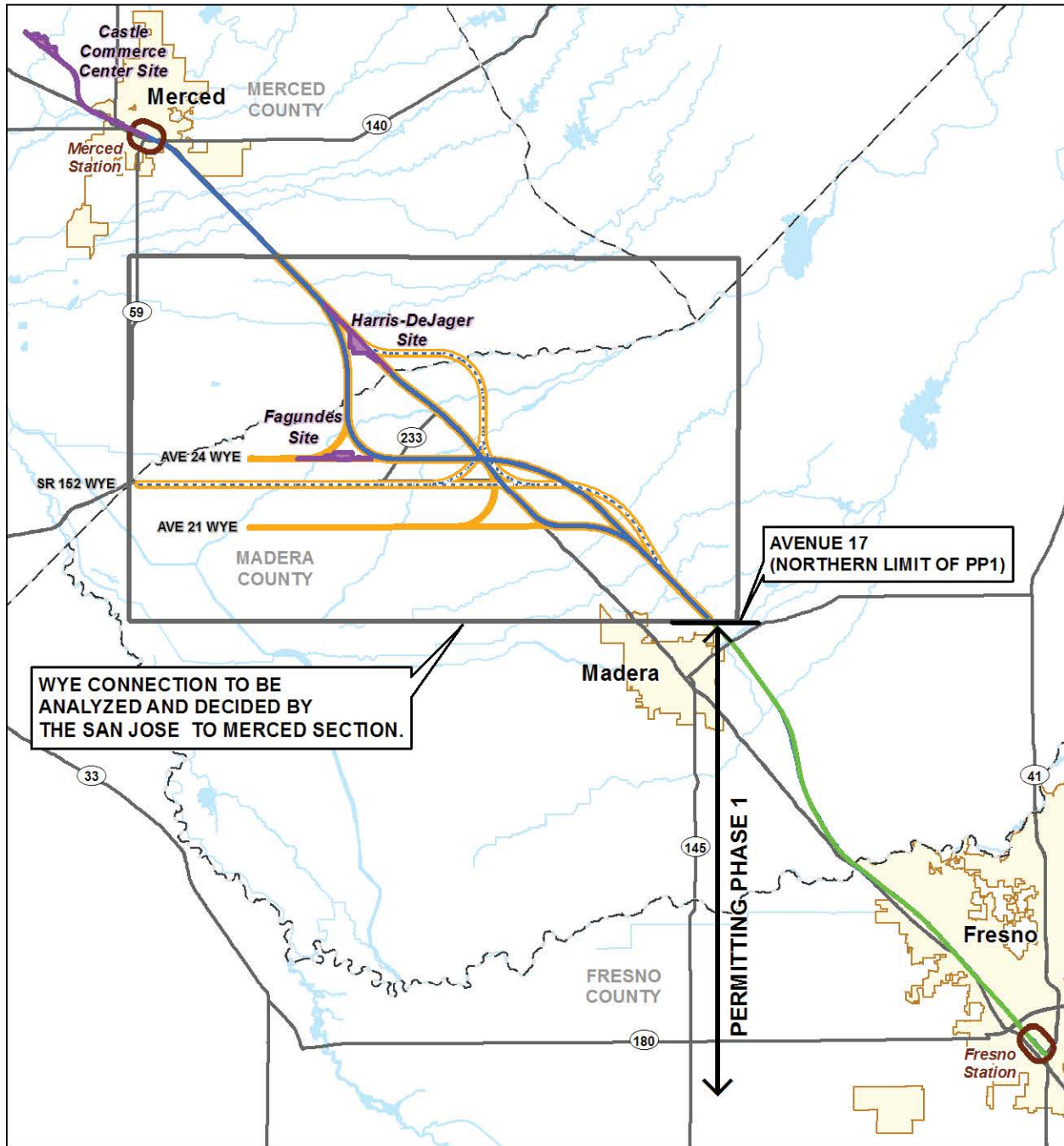




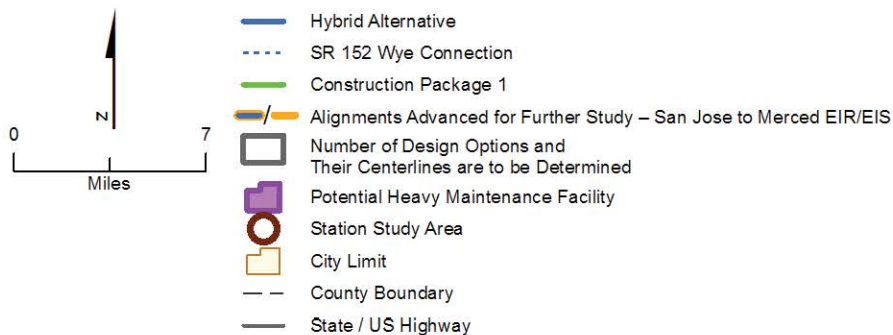
**Figure 1**  
California HST System



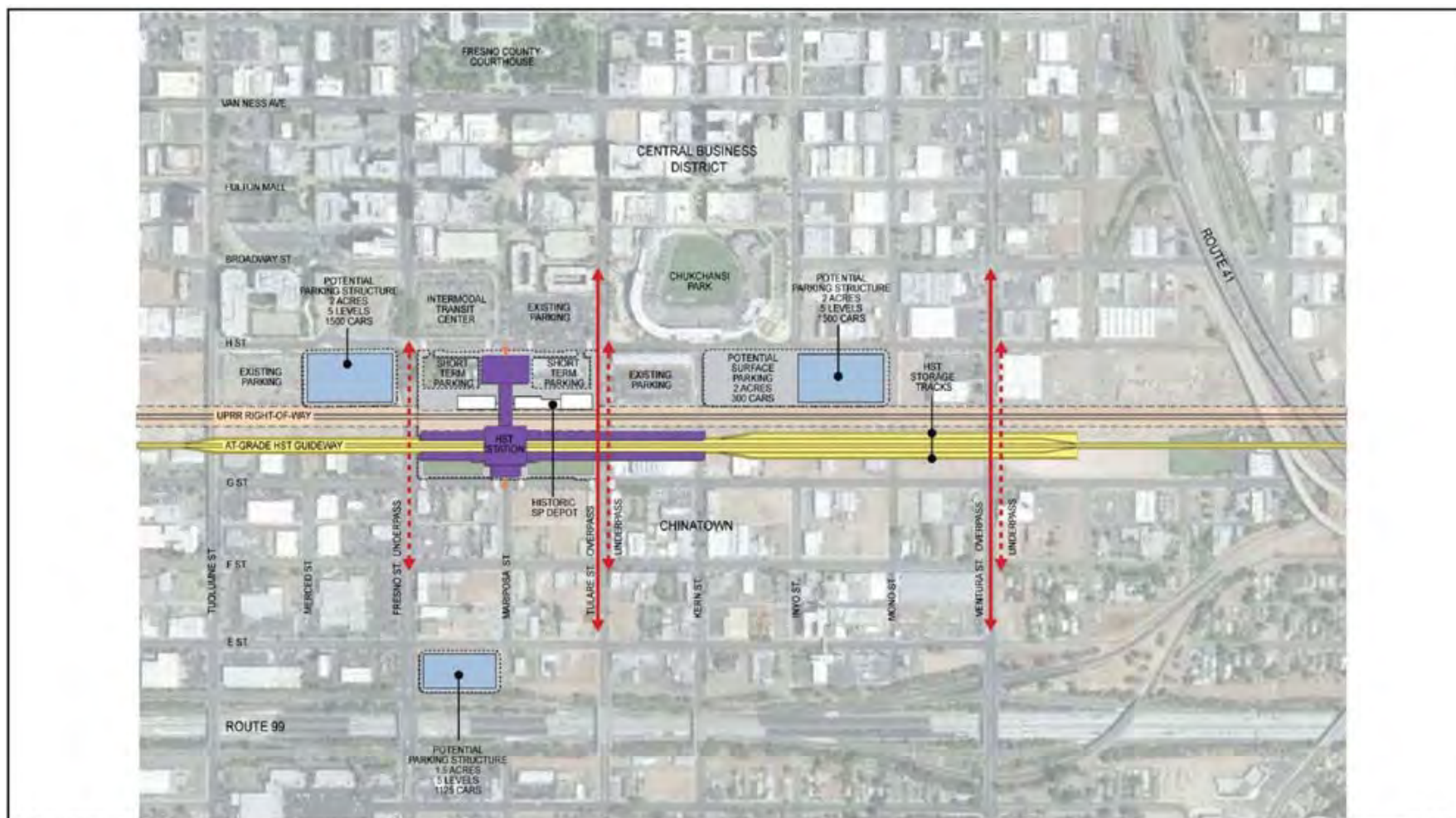
RFP No. 13-57 - Addendum No. 4 - 09/09/2014



MF\_PT\_PD\_04 Dec 05, 2012



**Figure 2**  
Hybrid Alternative and  
Permitting Phase 1



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

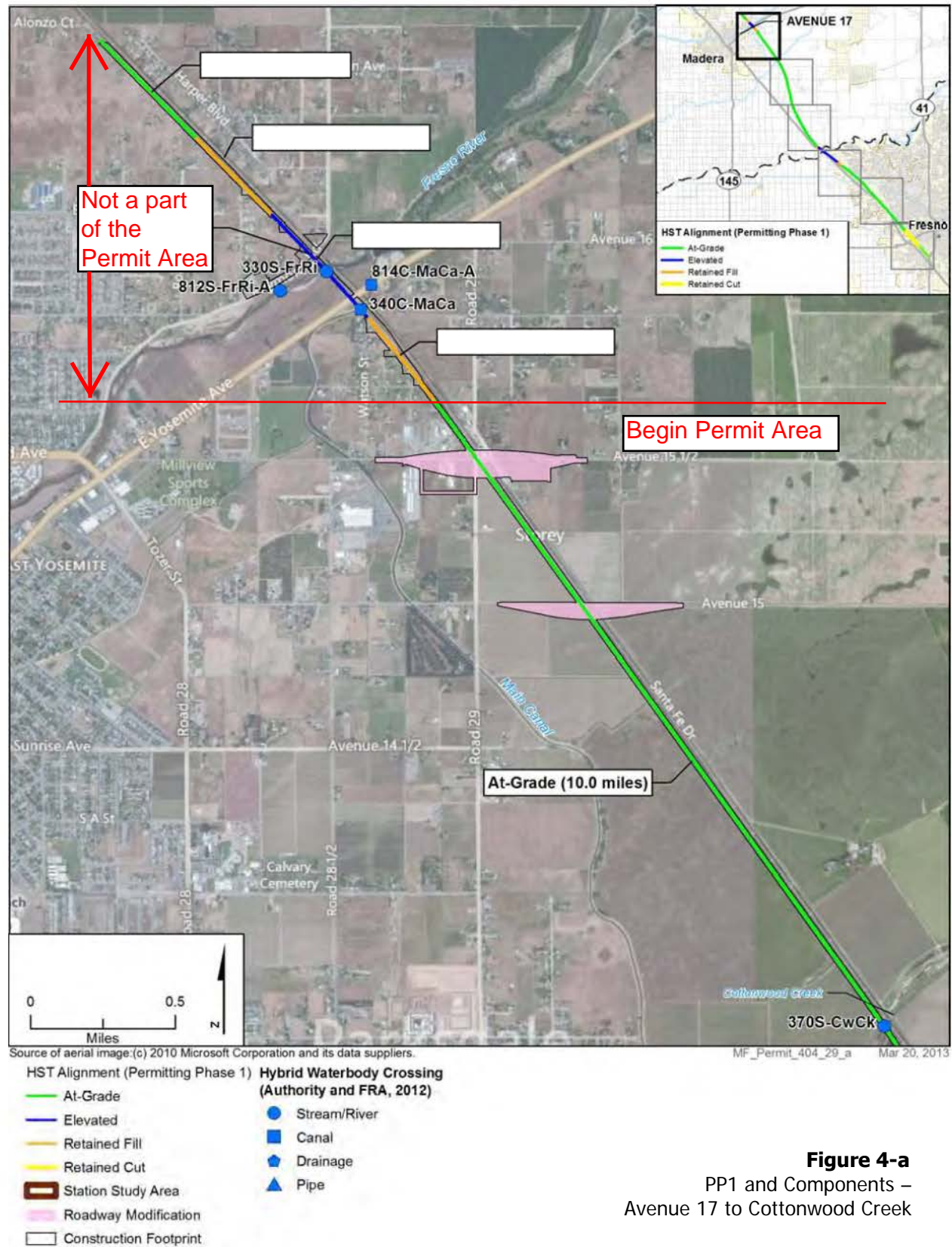
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NOT TO SCALE

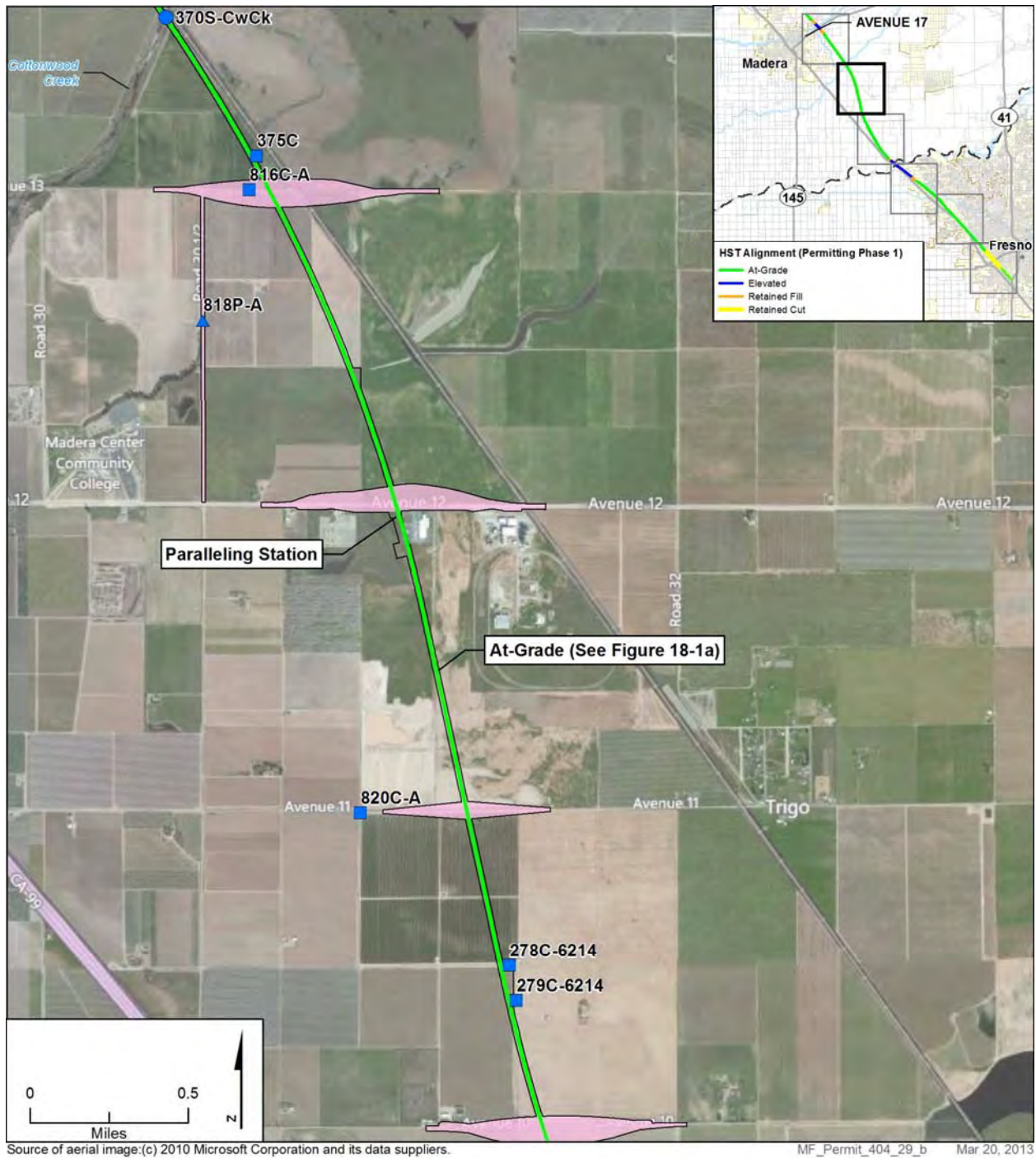
**Figure 3**  
Downtown Fresno Station







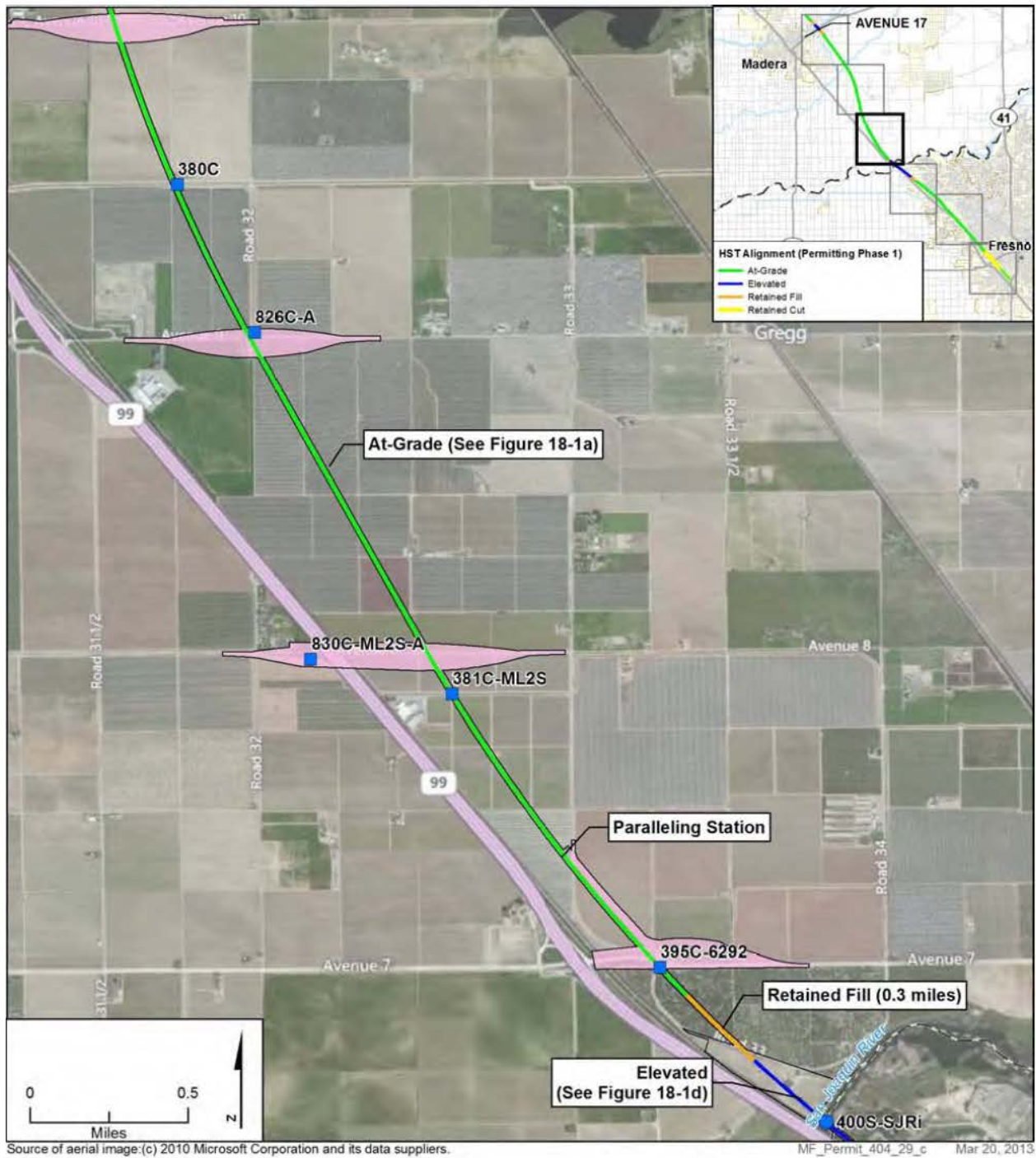
RFP No. 13-57 - Addendum No. 4 - 09/09/2014



- HST Alignment (Permitting Phase 1)**
- At-Grade
  - Elevated
  - Retained Fill
  - Retained Cut
  - Station Study Area
  - Roadway Modification
  - Construction Footprint
- Hybrid Waterbody Crossing (Authority and FRA, 2012)**
- Stream/River
  - Canal
  - Drainage
  - Pipe

**Figure 4-b**  
PP1 and Components –  
Cottonwood Creek to Avenue 10  
Grade Separation

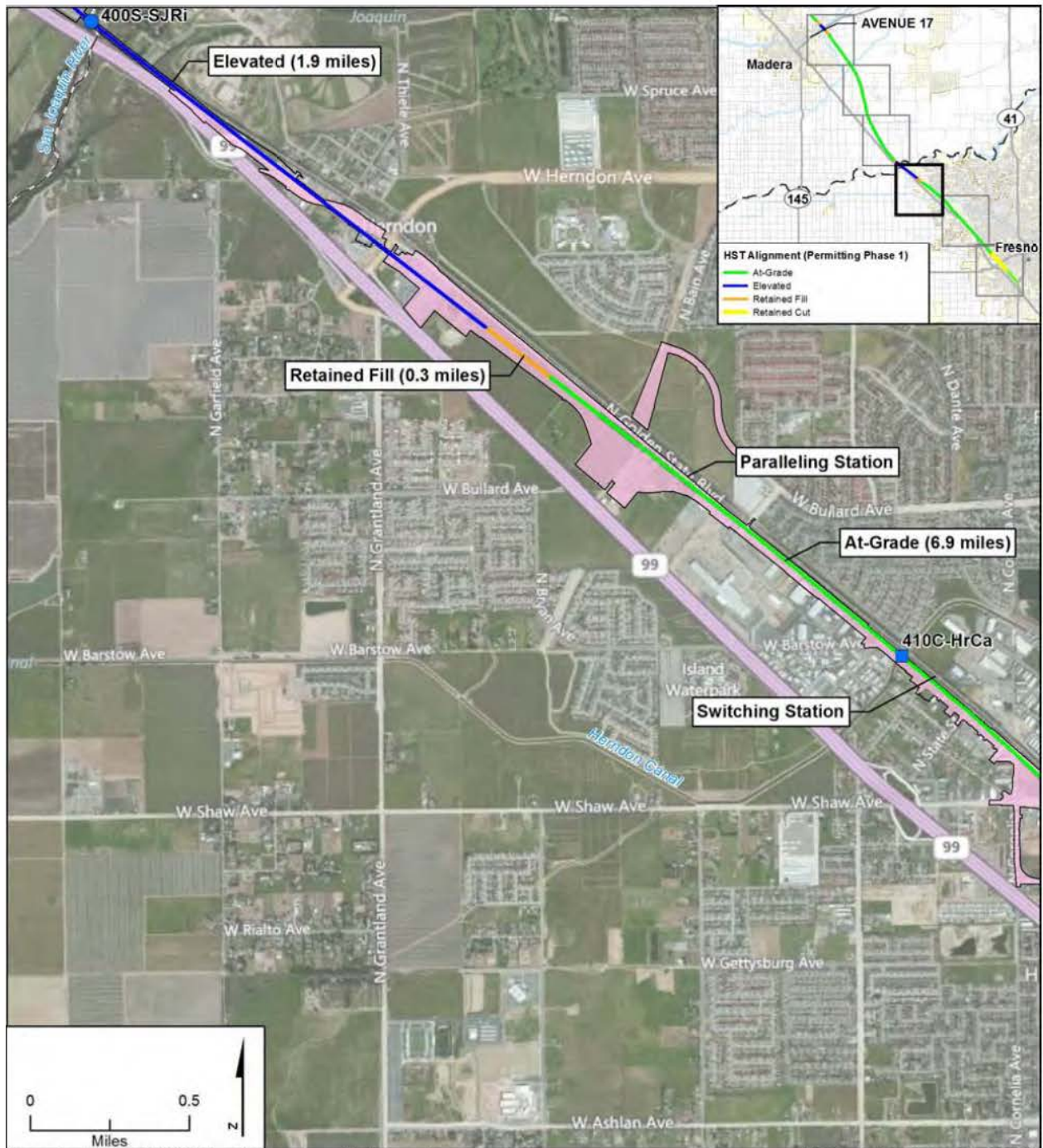




- HST Alignment (Permitting Phase 1)**
- At-Grade
  - Elevated
  - Retained Fill
  - Retained Cut
  - Station Study Area
  - Roadway Modification
  - Construction Footprint
- Hybrid Waterbody Crossing (Authority and FRA, 2012)**
- Stream/River
  - Canal
  - Drainage
  - Pipe

**Figure 4-c**  
PP1 and Components –  
Waterbody Crossing 380C  
to San Joaquin River

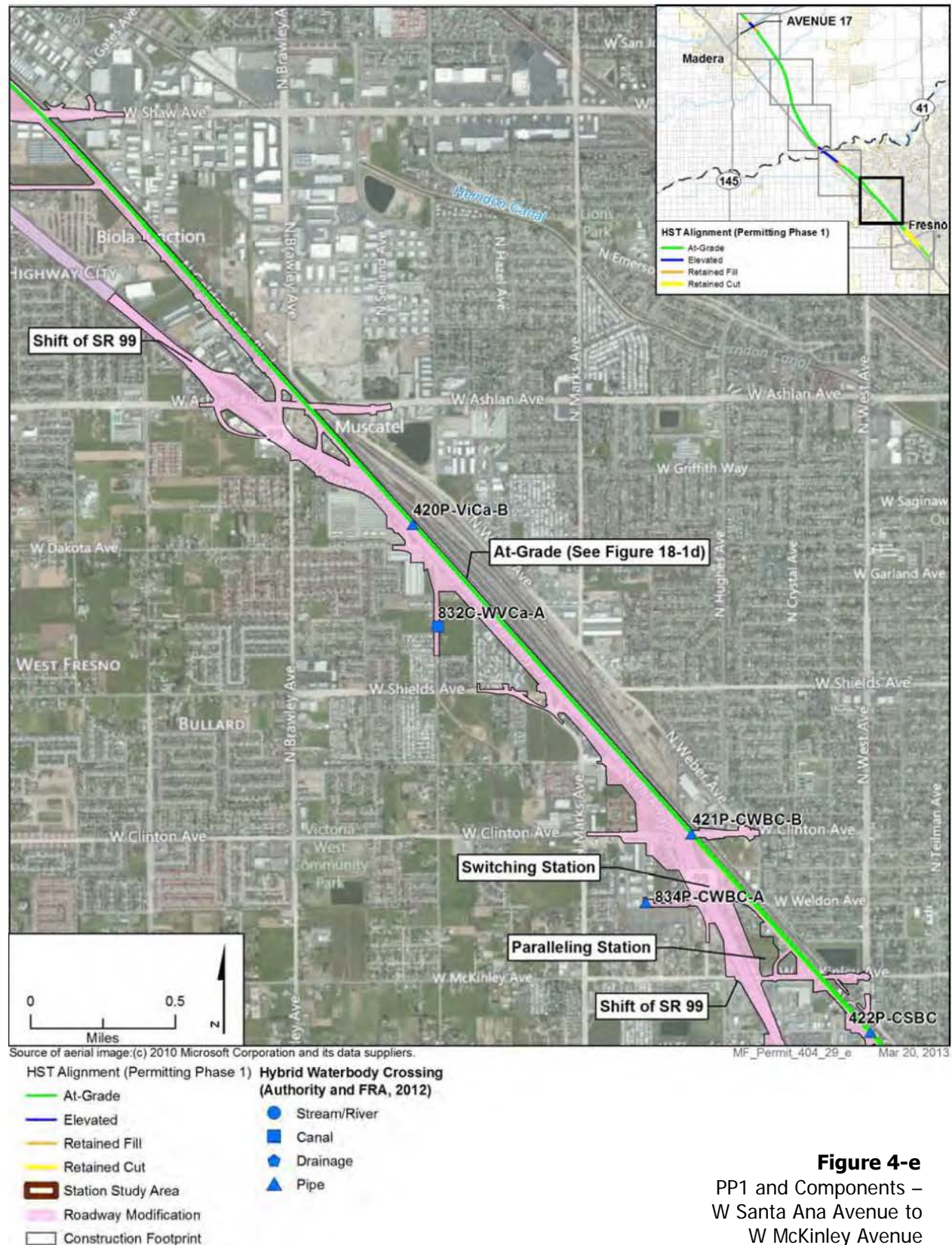
RFP No. 13-57 - Addendum No. 4 - 09/09/2014



- HST Alignment (Permitting Phase 1)**
- At-Grade
  - Elevated
  - Retained Fill
  - Retained Cut
  - Station Study Area
  - Roadway Modification
  - Construction Footprint
- Hybrid Waterbody Crossing (Authority and FRA, 2012)**
- Stream/River
  - Canal
  - Drainage
  - Pipe

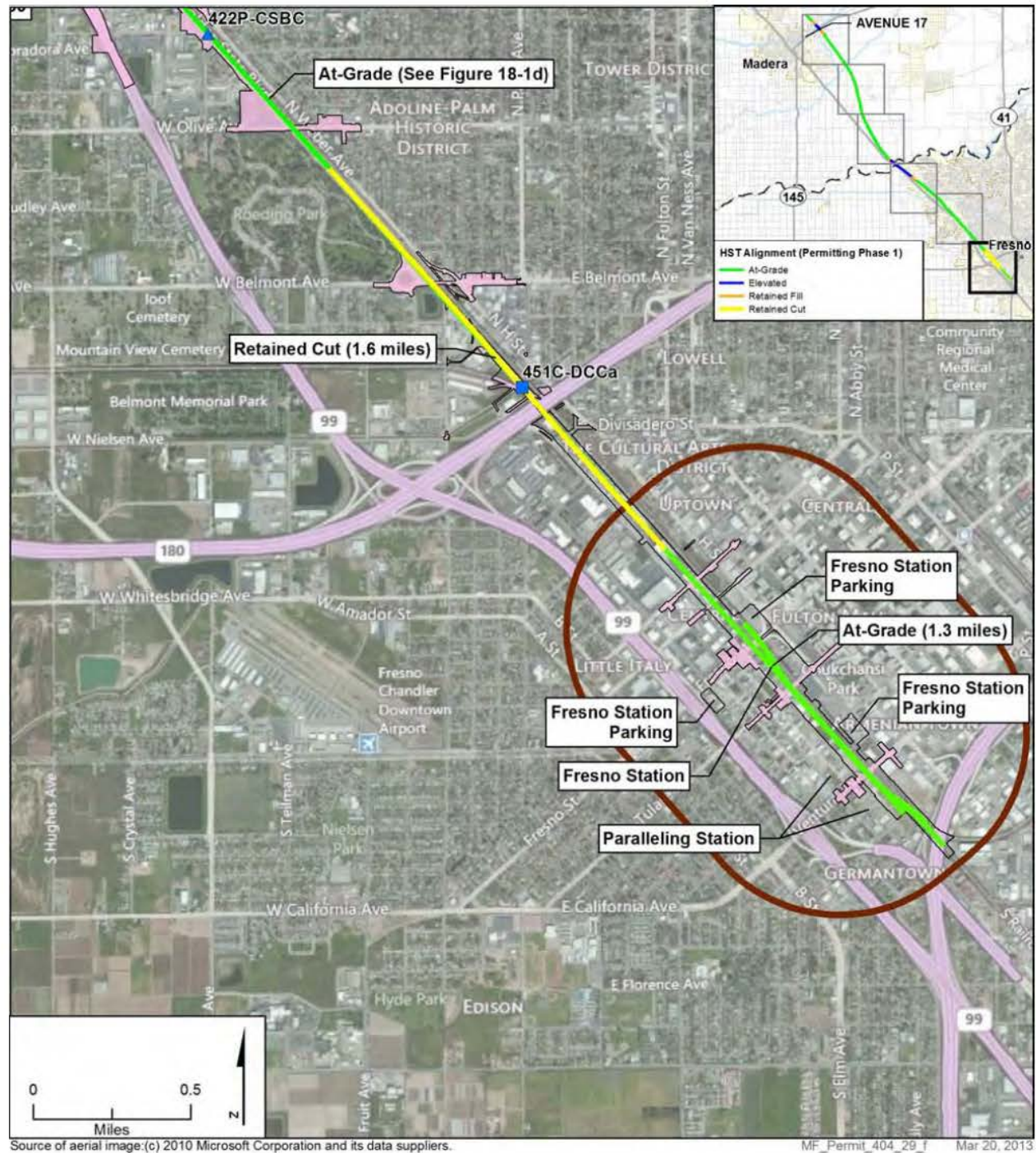
**Figure 4-d**  
PP1 and Components –  
San Joaquin River to  
W Santa Ana Avenue







RFP No. 13-57 - Addendum No. 4 - 09/09/2014



- HST Alignment (Permitting Phase 1)
- At-Grade
  - Elevated
  - Retained Fill
  - Retained Cut
  - Station Study Area
  - Roadway Modification
  - Construction Footprint
- Hybrid Waterbody Crossing (Authority and FRA, 2012)
- Stream/River
  - Canal
  - Drainage
  - Pipe

**Figure 4-f**  
PP1 and Components –  
W McKinley Avenue to  
Downtown Fresno Station

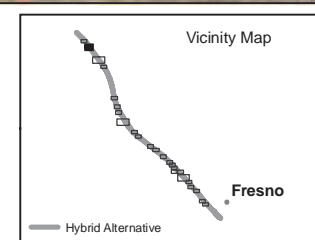
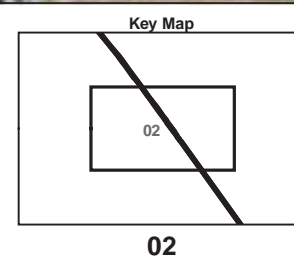
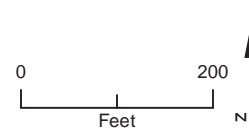


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|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



MF\_Permit\_404\_31\_02 Oct 08, 2013

**Map – 02**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



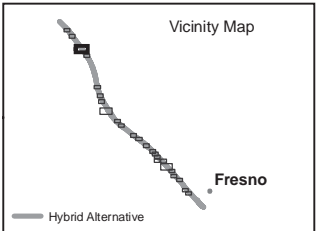
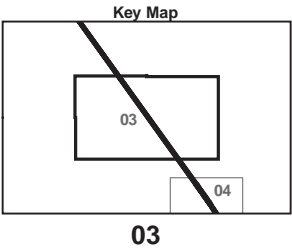
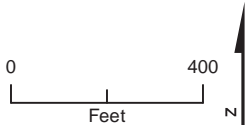
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- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 03**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project

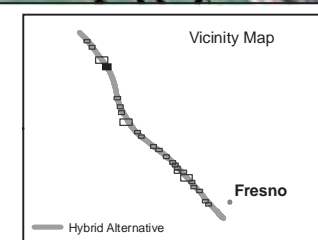
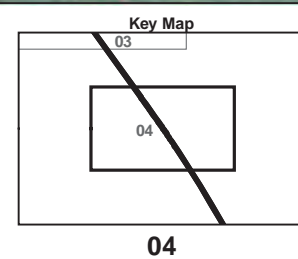
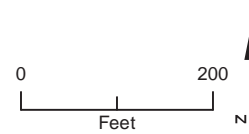


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| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007

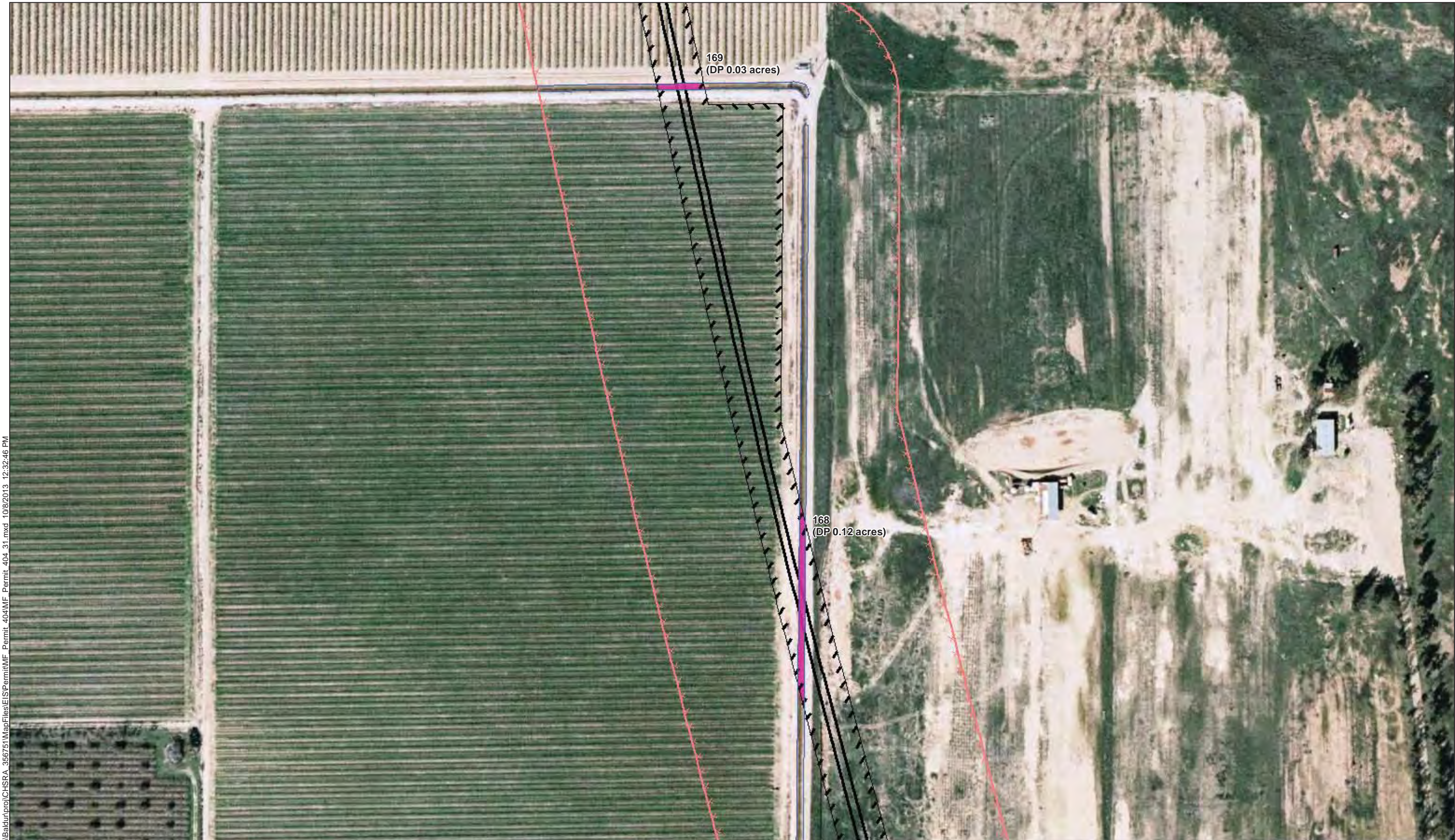


**Map – 04**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project

MF\_Permit\_404\_31\_04 Oct 08, 2013



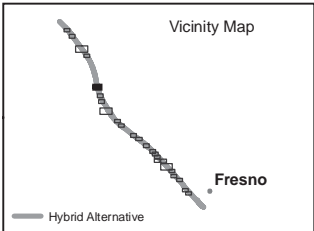
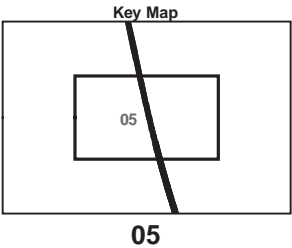
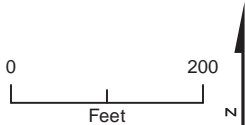
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MF\_Permit\_404\_31\_05 Oct 08, 2013

- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 05**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project

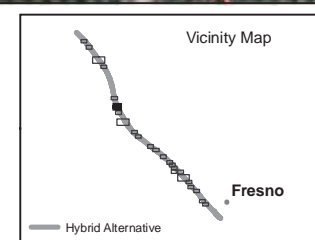
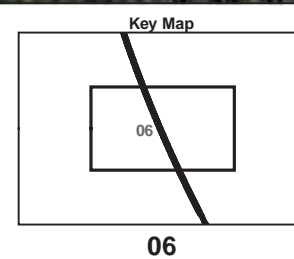
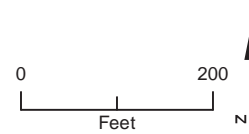


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- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



MF\_Permit\_404\_31\_06 Oct 08, 2013

**Map – 06**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



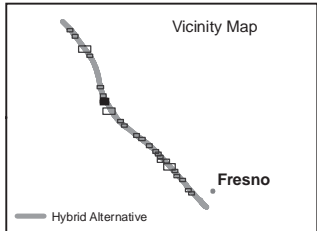
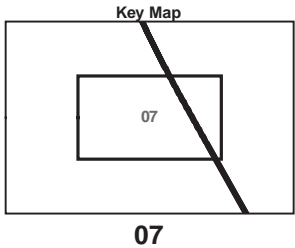
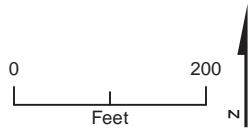
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MF\_Permit\_404\_31\_07 Oct 08, 2013

- |                    |                        |                         |                   |
|--------------------|------------------------|-------------------------|-------------------|
| Hybrid Alternative | Construction Footprint | Other Waters            | Direct, Permanent |
| County Boundary    | Wetland Survey Area    | Constructed Basin       | Direct, Temporary |
| Railroad           | Palustrine Wetlands    | Constructed Watercourse |                   |
|                    | Vernal Pool            | Natural Watercourse     |                   |
|                    | Seasonal Wetland       | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 07**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project

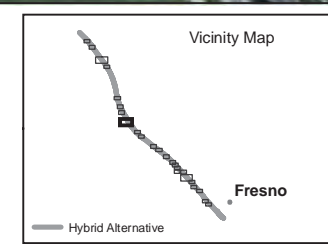
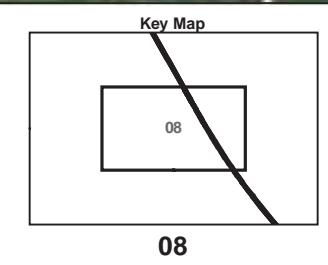
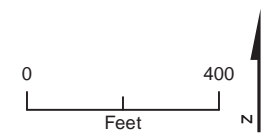


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- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 08**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



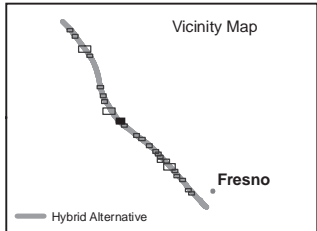
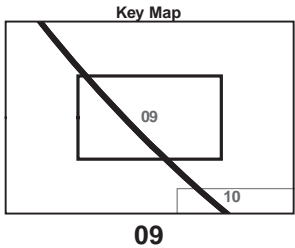
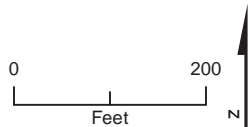
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MF\_Permit\_404\_31\_09 Oct 08, 2013

- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 09**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



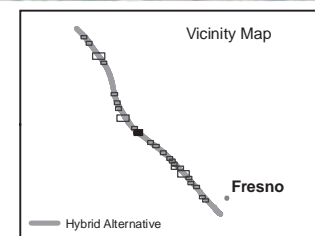
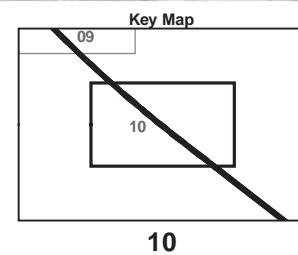
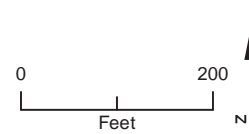
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MF\_Permit\_404\_31\_10 Oct 08, 2013

- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 10**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



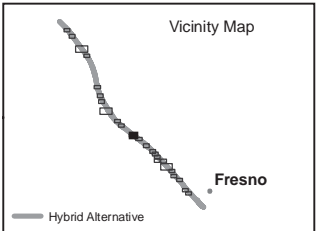
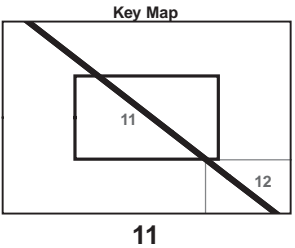
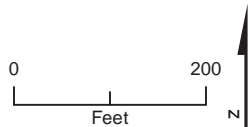
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- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 11**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



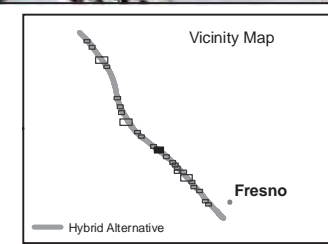
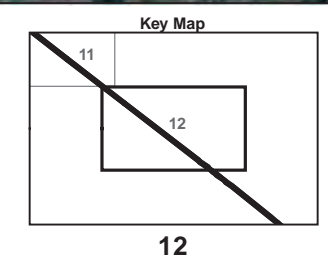
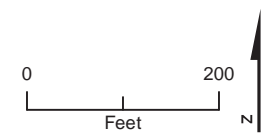
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MF\_Permit\_404\_31\_12 Oct 08, 2013

- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

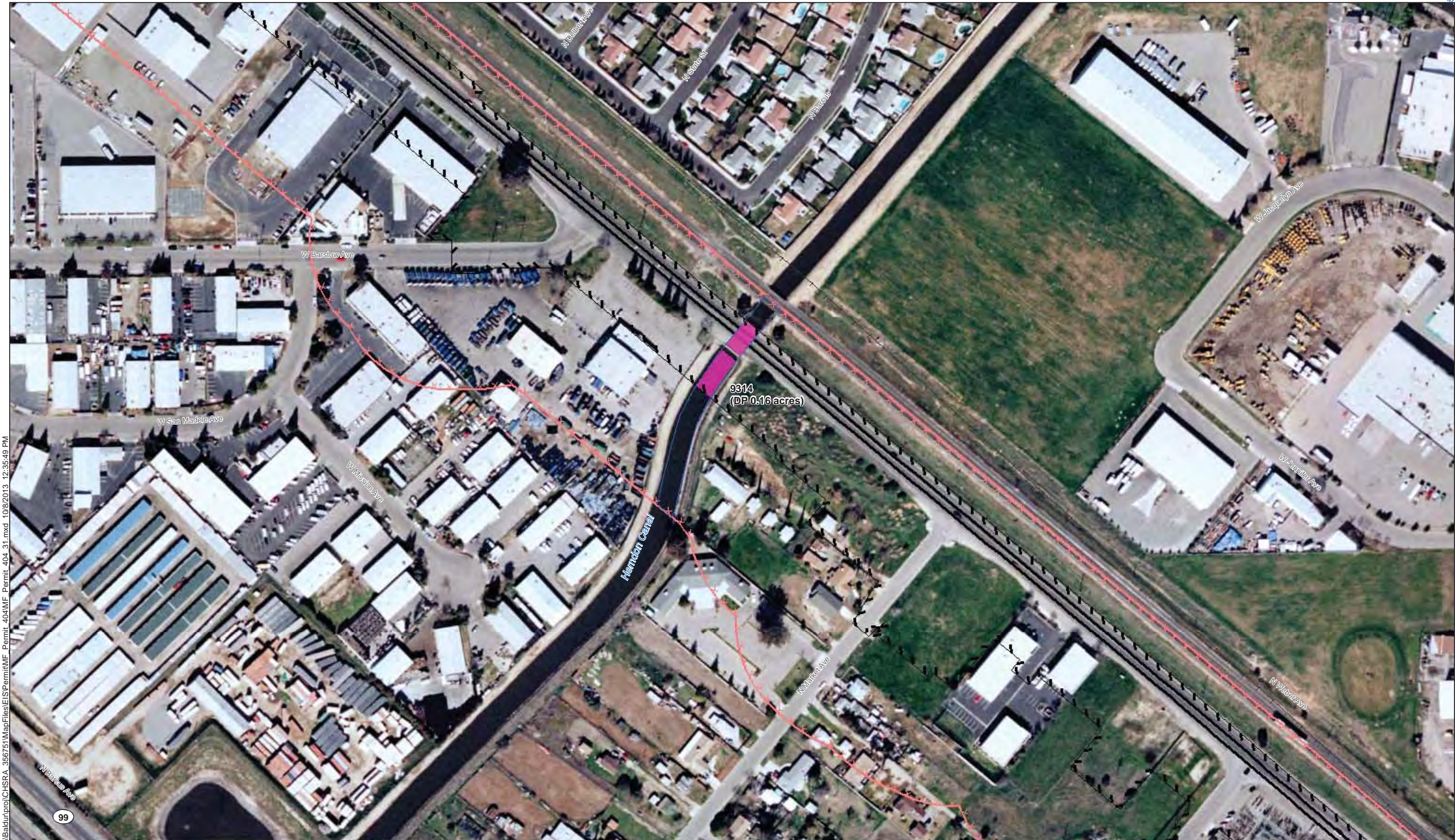
IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 12**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project

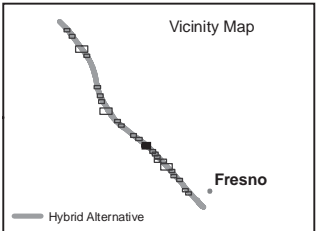
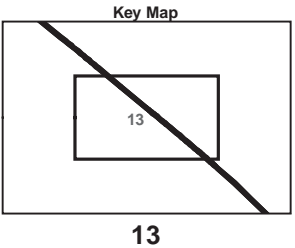
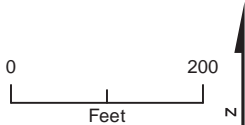


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- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 13**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



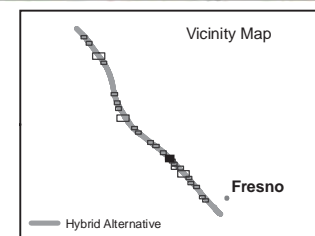
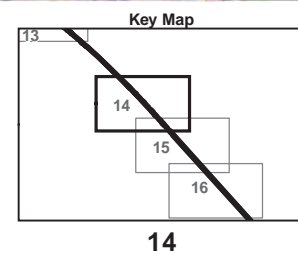
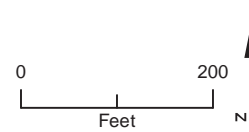
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MF\_Permit\_404\_31\_14 Oct 08, 2013

- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 14**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



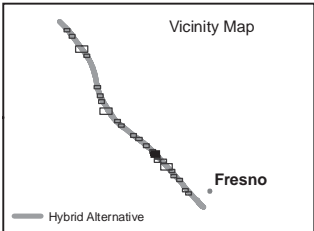
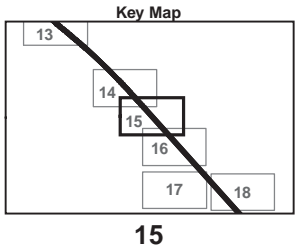
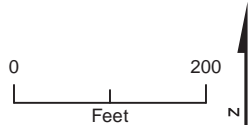
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MF\_Permit\_404\_31\_15 Oct 08, 2013

- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 15**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



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N Broadway Ave

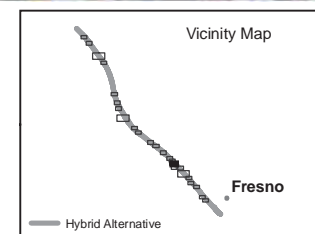
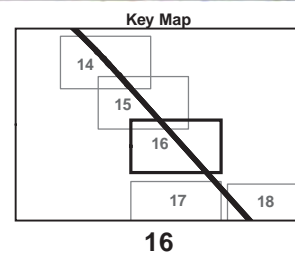
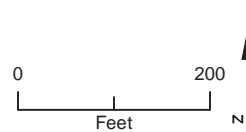
W Richer Ave

W Sun Ave

MF\_Permit\_404\_31\_16 Oct 08, 2013

- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 16**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



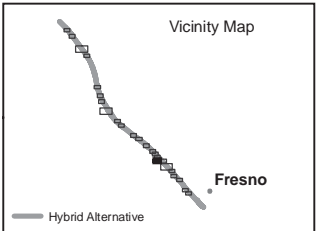
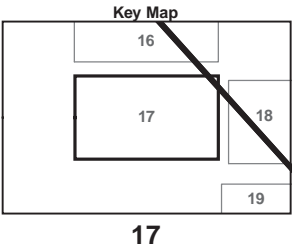
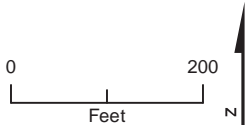
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- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 17**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project

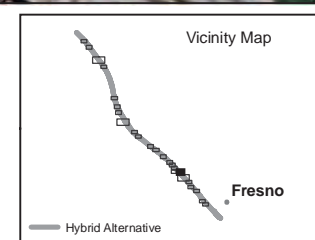
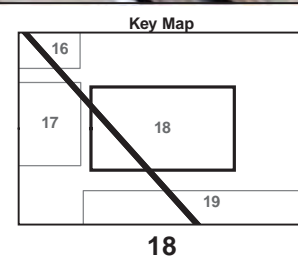
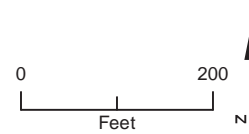


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- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



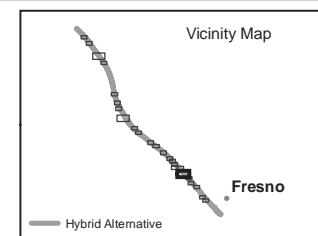
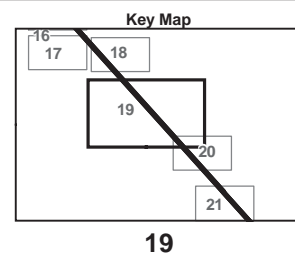
MF\_Permit\_404\_31\_18 Oct 08, 2013

**Map – 18**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project





IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 19**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
 Permitting Phase 1 Segment  
 Merced to Fresno Section  
 California High-Speed Train Project

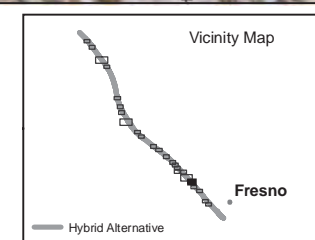
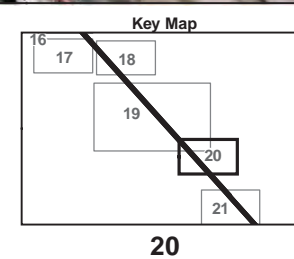
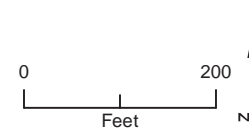


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- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 20**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



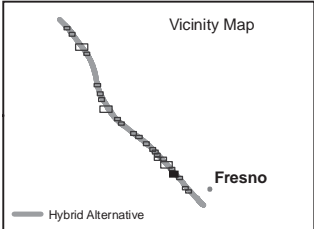
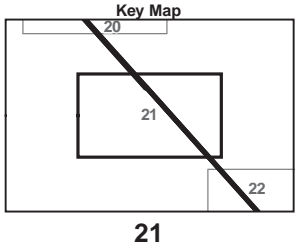
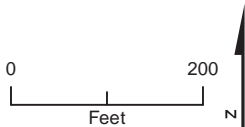
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MF\_Permit\_404\_31\_21 Oct 08, 2013

- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 21**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



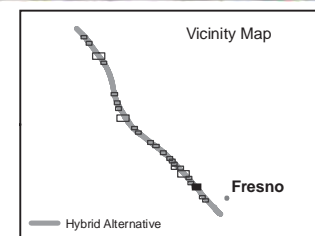
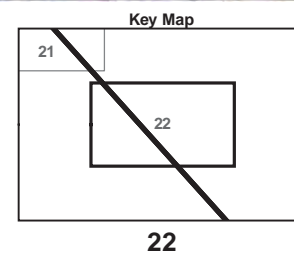
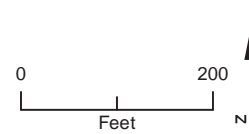
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MF\_Permit\_404\_31\_22 Oct 08, 2013

- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 22**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project

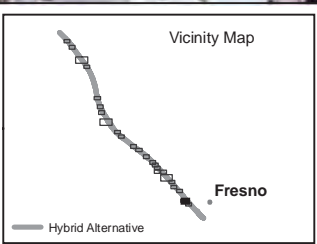
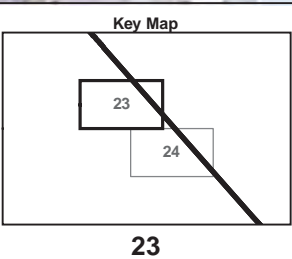
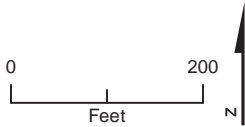


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- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



**Map – 23**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project

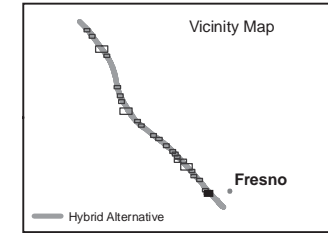
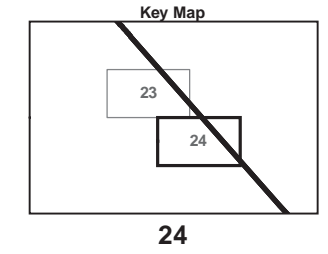
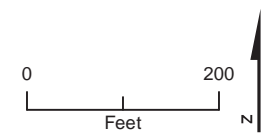


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- |                      |                            |                         |                   |
|----------------------|----------------------------|-------------------------|-------------------|
| — Hybrid Alternative | Construction Footprint     | <b>Other Waters</b>     | Direct, Permanent |
| - - County Boundary  | Wetland Survey Area        | Constructed Basin       | Direct, Temporary |
| + Railroad           | <b>Palustrine Wetlands</b> | Constructed Watercourse |                   |
|                      | Vernal Pool                | Natural Watercourse     |                   |
|                      | Seasonal Wetland           | Open Water              |                   |

IMAGERY SOURCE: Mapcon Mapping, Ltd. 2007



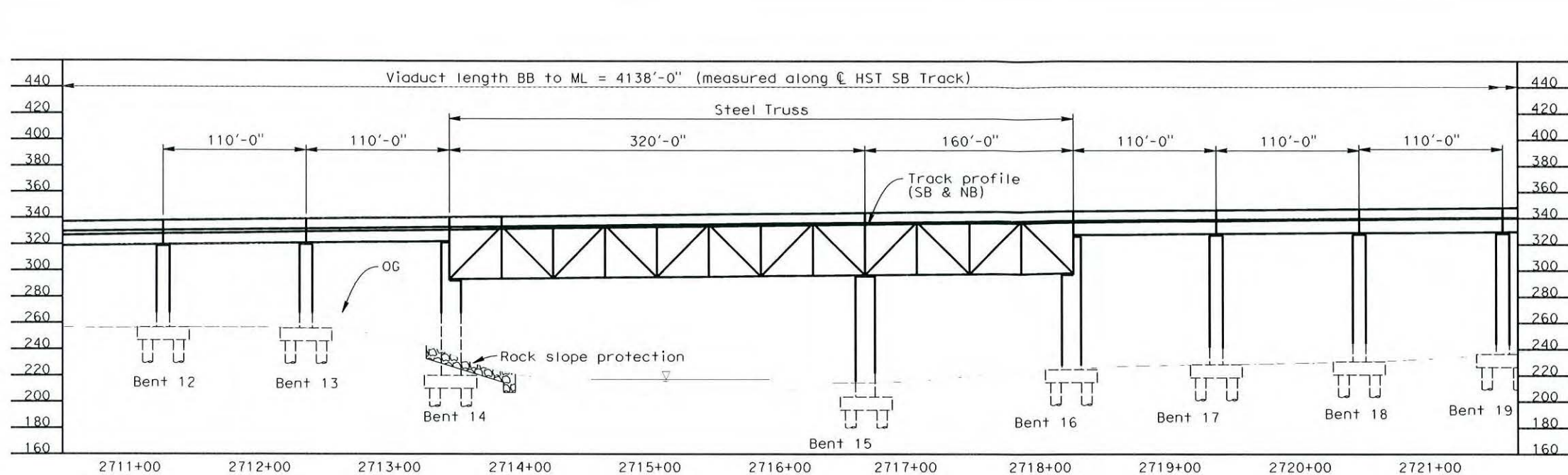
**Map – 24**  
**Section 404 Permit Application**  
**October 2013 Modification Package**  
Permitting Phase 1 Segment  
Merced to Fresno Section  
California High-Speed Train Project



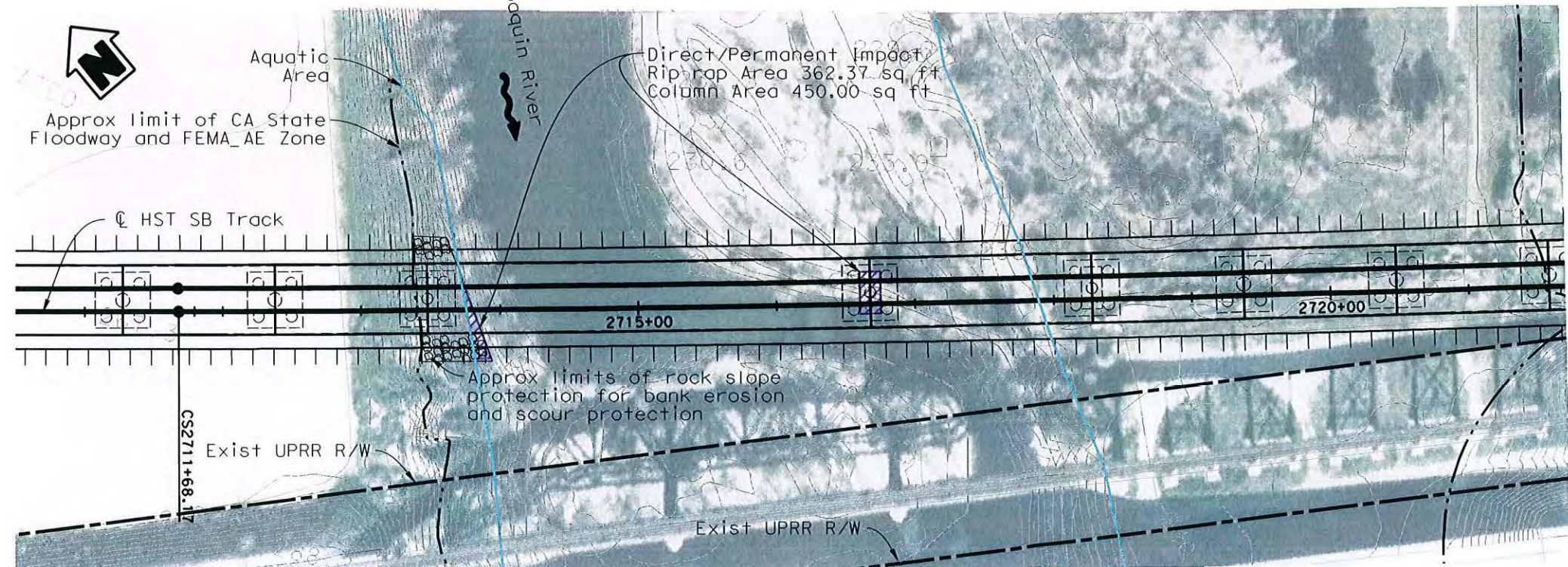




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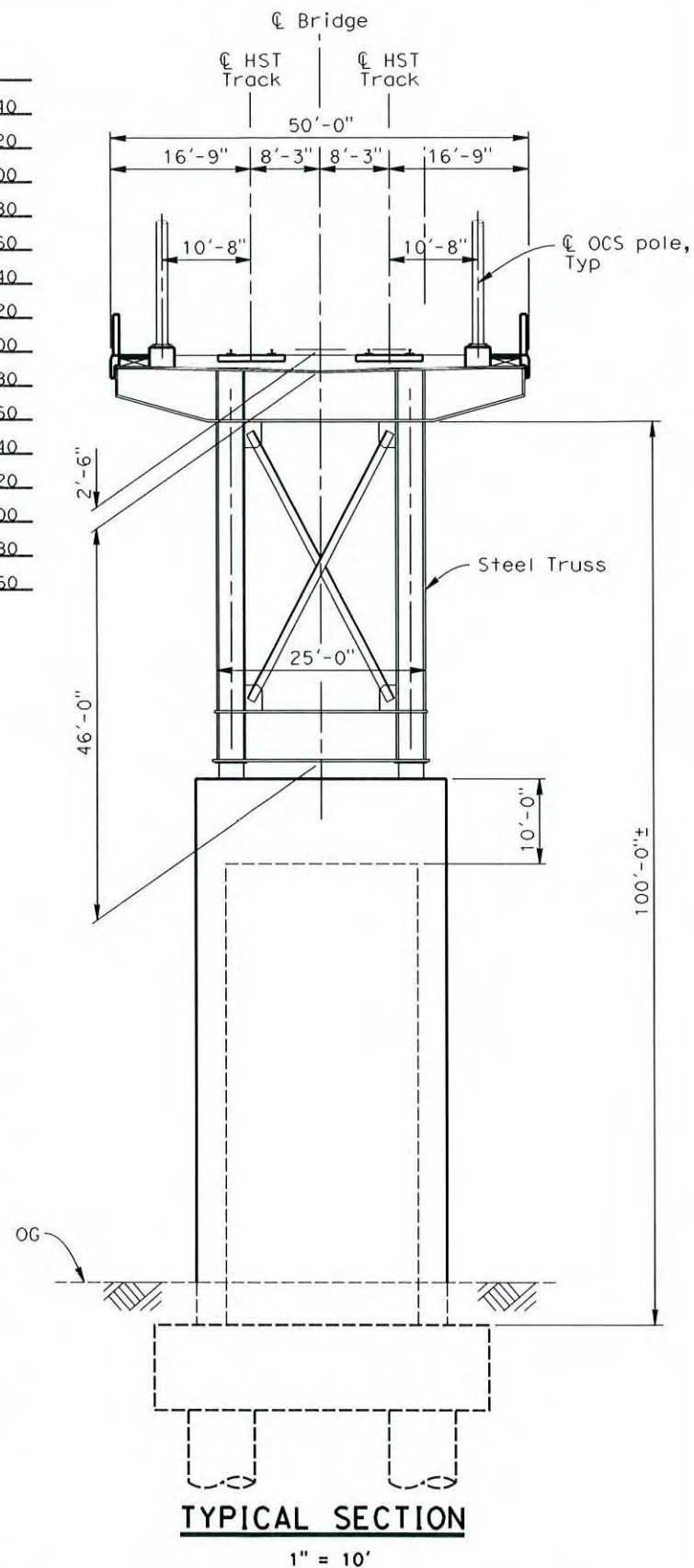
**ELEVATION**  
1" = 50'



**PLAN**  
1" = 50'

LEGEND:

Direct/Permanent Impact



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
T. BARNARD

DRAWN BY  
Z. ABAJIAN

CHECKED BY  
T. BARNARD

IN CHARGE  
A. Boone

DATE  
02/01/2012

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2000 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



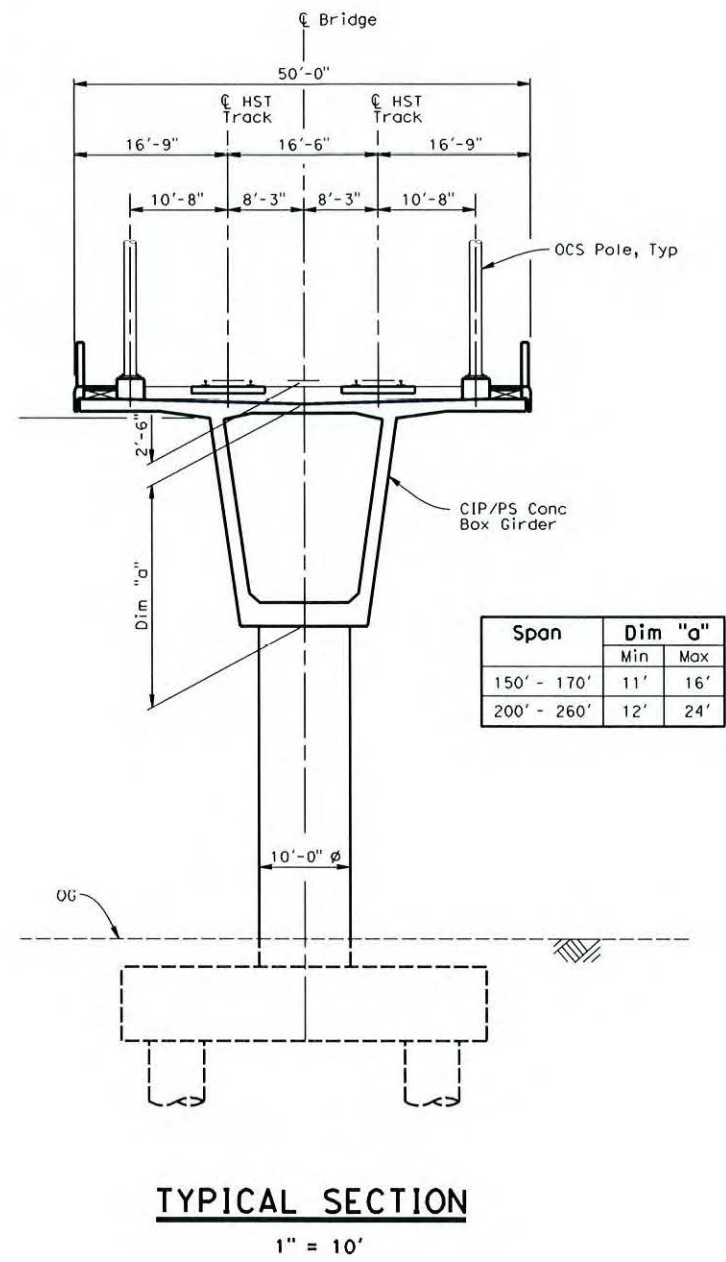
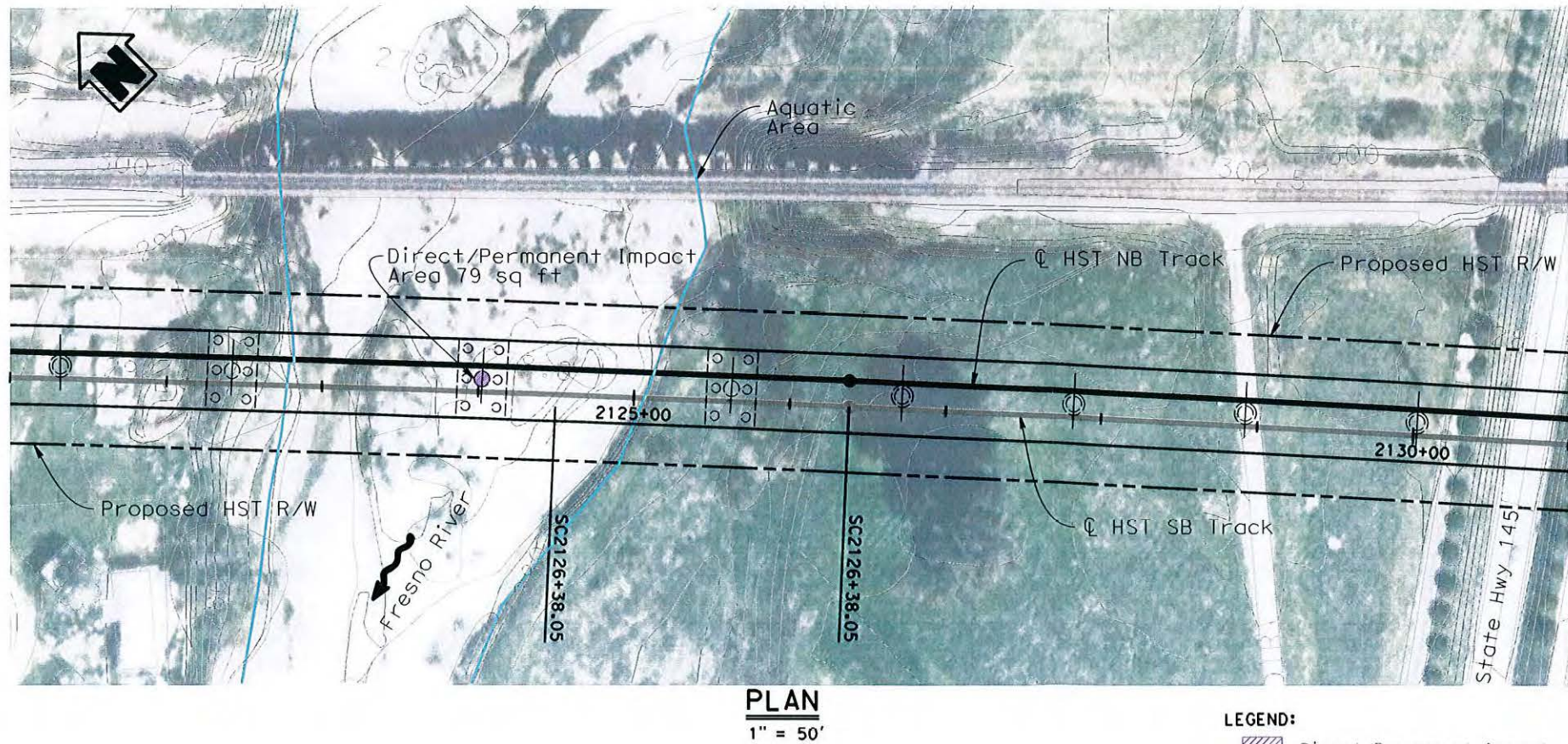
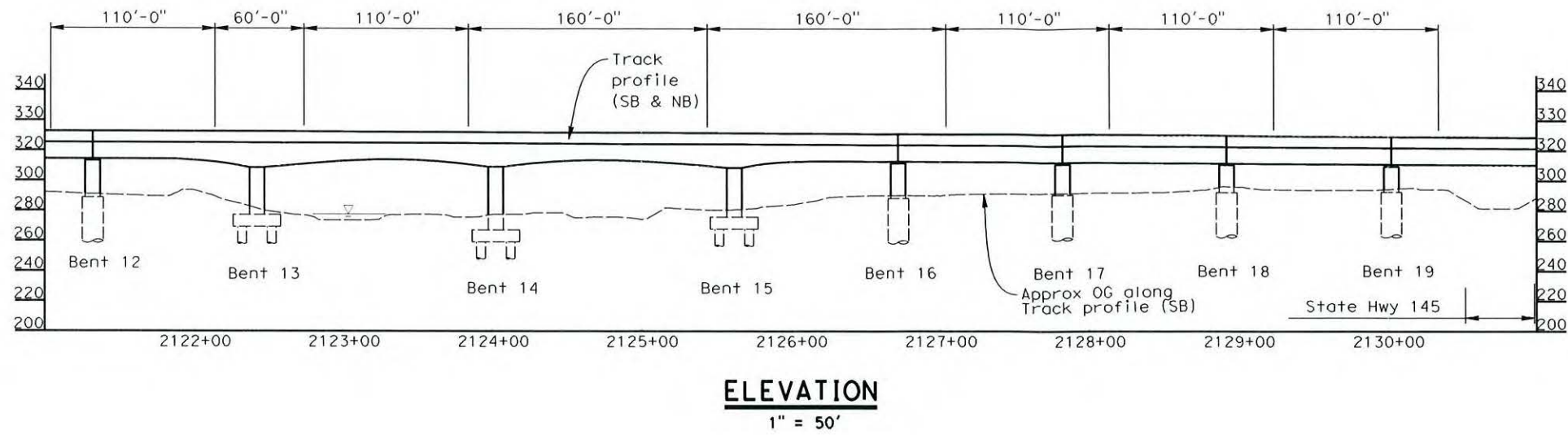
**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
SAN JOAQUIN RIVER  
WETLAND ID**

CONTRACT NO.
DRAWING NO.
SCALE
SHEET NO.



3/8/2013 1:03:12 PM PenTbl\_24.tbl CHSR\_half\_black\_404 PERMITS.tbl 1p001 Cadd\CHSR\60022962\Task-03\_Merced-Fresno\400\Civil\Sheet\404 Permits\01 Impact.dgn



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. BARNARD
DRAWN BY Z. ABAJIAN
CHECKED BY T. BARNARD
IN CHARGE A. Boone
DATE 02/01/2012

PROPOSED  
PRELIMINARY  
DESIGN  
  
NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



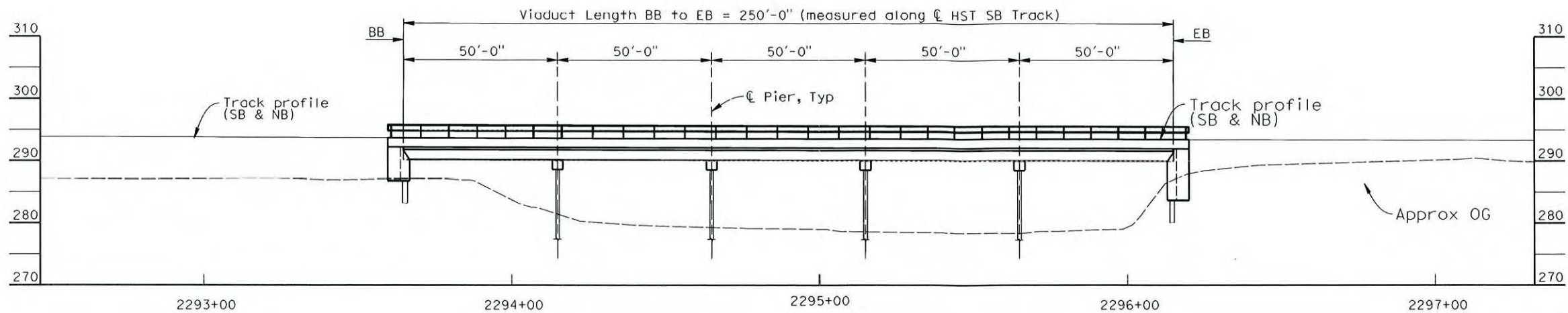
**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
FRESNO RIVER  
WETLAND ID**

CONTRACT NO.
DRAWING NO.
SCALE
SHEET NO.

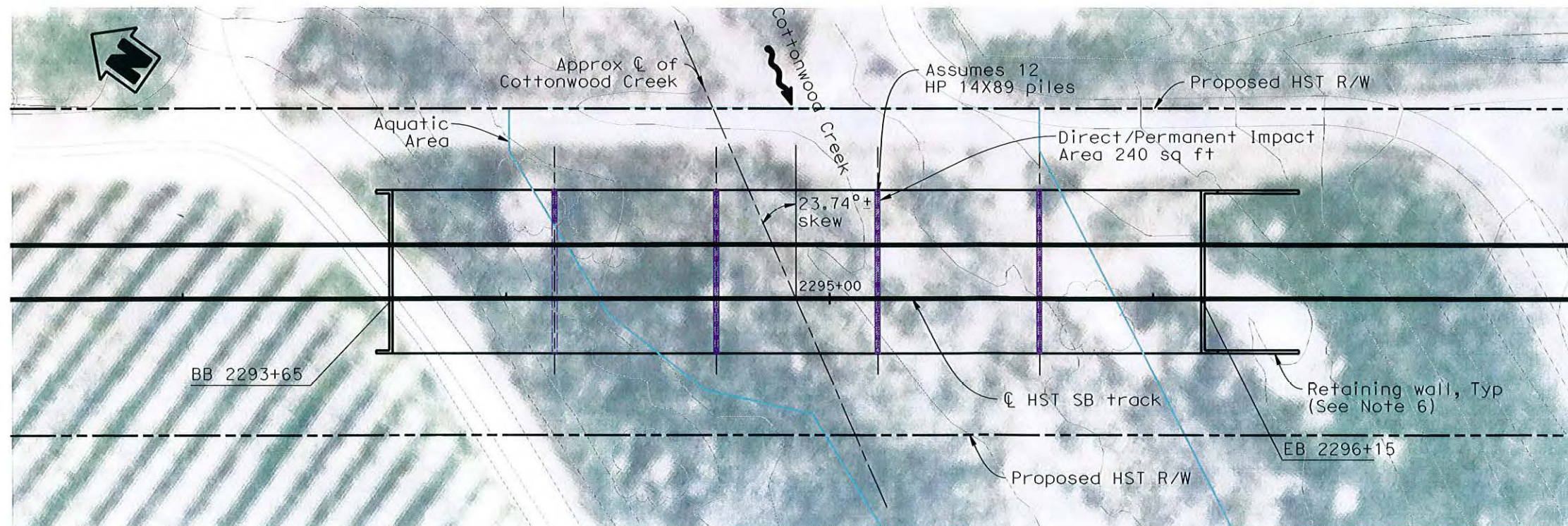


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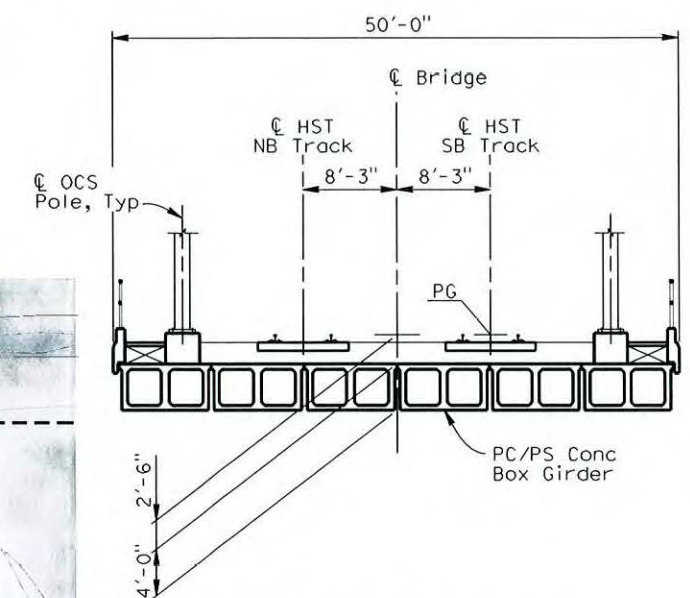
### ELEVATION

Vertical 1" = 5'  
Horizontal 1" = 20'



### PLAN

1" = 20'



### TYPICAL SECTION

1/8" = 1'-0"

#### LEGEND:

Direct/Permanent Impact

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. BARNARD
DRAWN BY Z. ABAJIAN
CHECKED BY T. DUDLEY
IN CHARGE D. MINISTER
DATE 02/01/2012

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



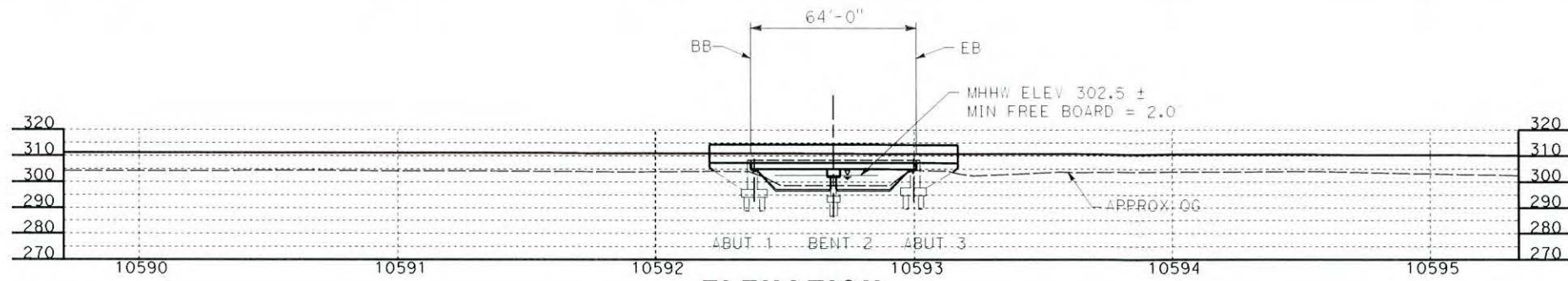
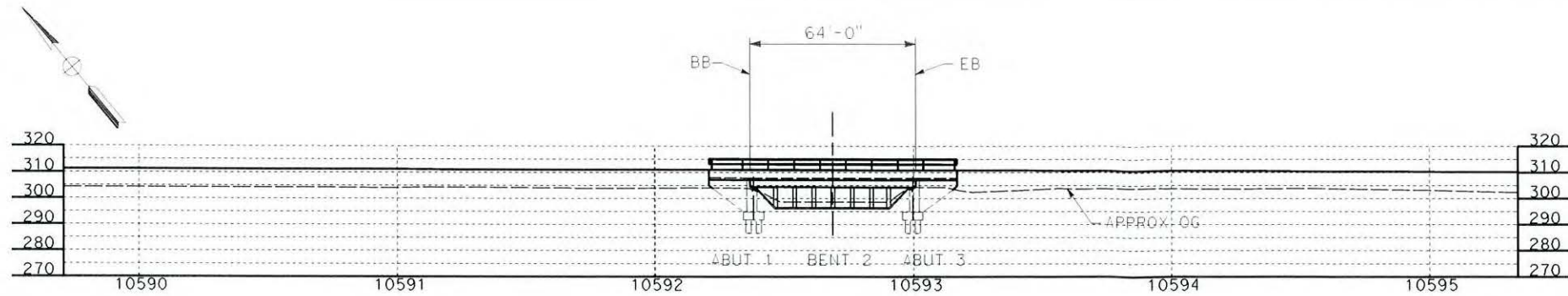
**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
COTTONWOOD CREEK  
WETLAND ID**

CONTRACT NO.
DRAWING NO.
SCALE
SHEET NO.

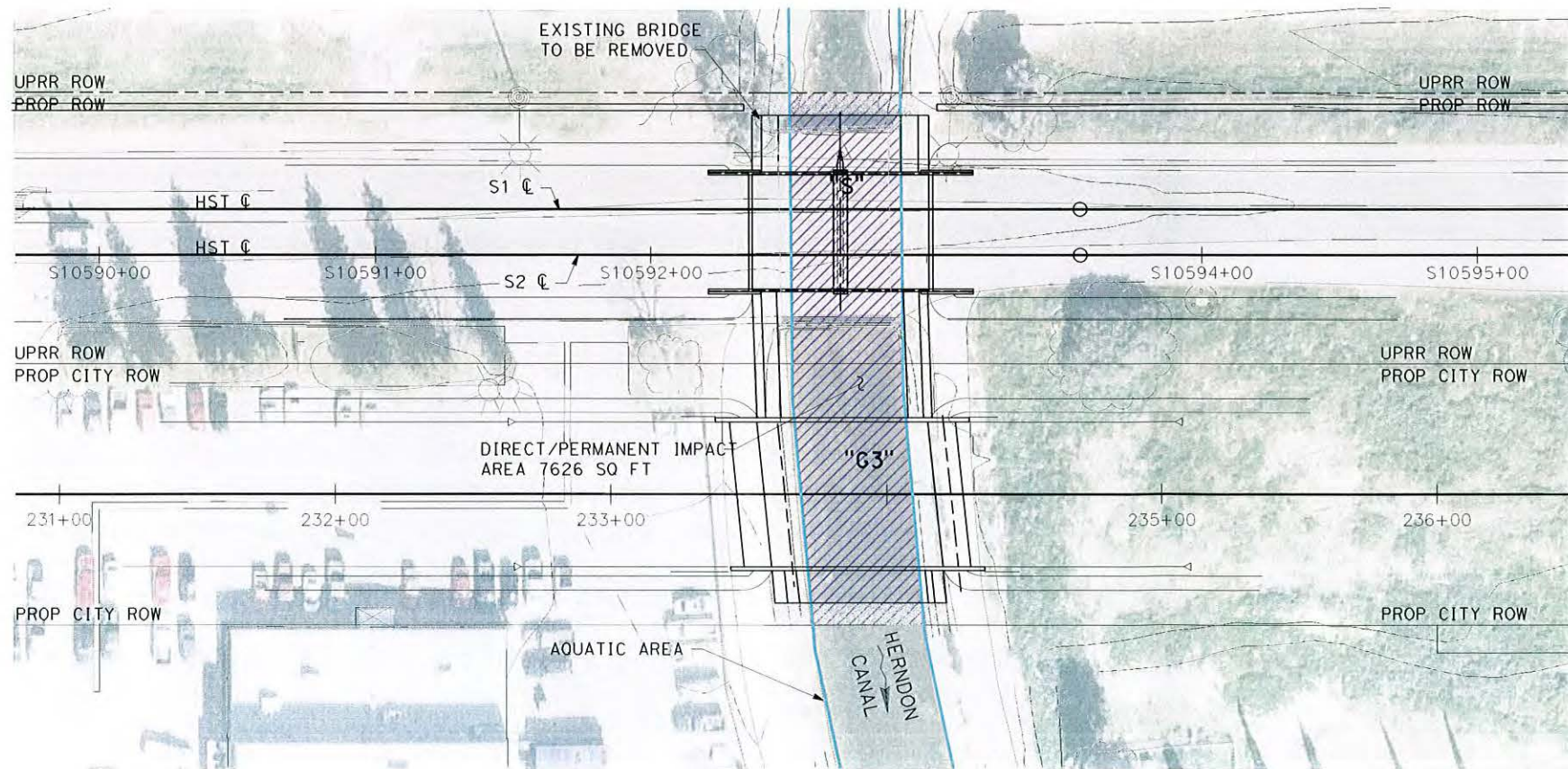


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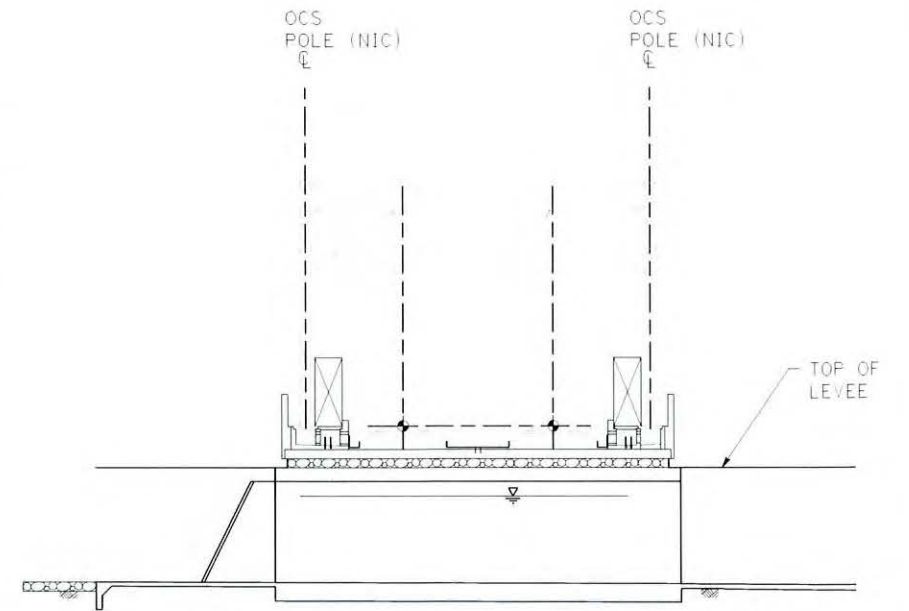
ELEVATION

SCALE: 1" = 30'



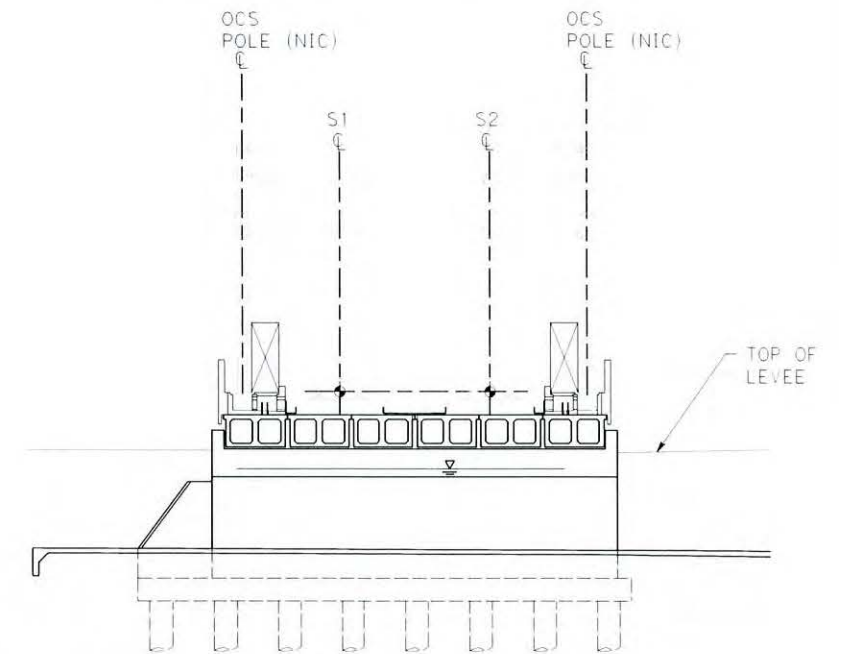
PLAN

SCALE: 1"=30'-0"



TYPICAL SECTION-BOX CULVERT

SCALE: 1"=10'-0"



TYPICAL SECTION-BRIDGE

SCALE: 1"=10'-0"

LEGEND:

- PC/PS PILE
- EXISTING STRUCTURE
- DIRECT/PERMANENT IMPACT

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. BARNARD
DRAWN BY Z. ABAJIAN
CHECKED BY T. DUDLEY
IN CHARGE D. MINISTER
DATE 02/01/2012

PROPOSED  
PRELIMINARY  
DESIGN  
  
NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**SIERRA SUBDIVISION**  
HST/UPRR BRIDGE AT HERNDON CANAL  
WETLAND ID

CONTRACT NO.
DRAWING NO. ST-11003
SCALE AS SHOWN
SHEET NO.